

Claims

1. A sensing system for detecting obstacles by a vehicle with an exterior mirror inside a mirror housing which system comprises (i) an area sensing means mounted in the mirror housing of an exterior mirror of the vehicle which area sensing means is capable of detecting obstacles and (ii) a control signal transmission means mounted inside or adjacent to the mirror housing and connected to the area sensing means in which, when the area sensing means detects an obstacle, a control signal is sent by the control signal transmission means to a control signal receiver inside the cab of the vehicle.
2. A system as claimed in claim 1 in which the control signal transmission means is mounted directly inside the mirror housing or is mounted outside of the mirror housing fitted to the outside of the vehicle.
3. A system as claimed in claim 1 or 2 in which the area sensing means produces a digital signal based on the area of detection and the signal is processed and analysed by a digital signal processing means which then interprets and outputs the control signal.
4. A system as claimed in claim 1, 2 or 3 in which the area sensing means is a means which can sense obstacles and objects in its field of view, and is based on radar technology, electromagnetic radiation, or magnetic effects using a magnetometer.
5. A system as claimed in claim 1, 2, 3 or 4 in which the area sensing means includes ultra-sound or infra-red or other remote non-contact distance sensing means.
6. A system as claimed in any one of the preceding claims in which there is a control signal receiving means inside the driver's cab of the vehicle which can deliver a warning to the driver.

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7. A system as claimed in claim 6 in which the driver warning means is in the form of either or both a visual or audible means.

5 8. A system as claimed in claim 7 in which the signal changes as the distance from the obstacle changes.

9. A system as claimed in claim 8 in which the signal is an audio signal and the pitch and/or the volume of the signal increases as the distance from the obstacle decreases.

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10. A system as claimed in claim 8 in which the signal is a visual signal and the brightness and/or colour changes as the distance from the obstacle decreases.

11. A system as claimed in any one of claims 6 to 10 in which the control signal
15 transmitting and receiving means is wireless.

12. A system as claimed in any one of the preceding claims in which the control signal receiving means and driver warning means are mounted within the same unit and together require only a single power connection from inside the vehicle.

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13. A system as claimed in any one of the preceding claims in which the area sensing and wireless control signal transmitting means together require only one power connection.

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14. A system as claimed in any one of the preceding claims in which the mirror is a self adjusting mirror.

15. A system as claimed in claim 14 in which the self adjusting mirror comprises a mirror assembly which incorporates a mirror having a reflective surface, a mirror
30 adjusting means and an image sensing means whereby the mirror adjusting means is

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able to adjust the orientation of the reflective surface of the mirror in response to images perceived by the image sensing means.